

Application No. 09/362,021

REMARKS

In response to the Office Action of October 2, 2003, Applicants have carefully considered the rejections of the Examiner in the above-identified application. In light of this consideration, Applicants believe that the claims remain allowable. Applicants respectfully request reconsideration of the rejection of the claims now pending in the application.

In the first Office Action of April 1, 2003, claims 1-3, 16, 19, 20 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting over co-pending patent 09/362,022. Claims 1-22 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,555,557, to Mailloux (hereinafter Mailloux).

In this second Office Action of October 2, 2003, claims 1-22 are rejected under 35 U.S.C. §112 second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Claims 1-6, 11, 12, 16, 17, 19, and 21 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,818,504, to Chung et al. (hereinafter Chung). Claims 7-10 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chung in view of Mailloux. Claims 13-15, and 20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chung in view of U.S. Patent No. 6,181,438, to Bracco, et al. (hereinafter Bracco). Claims 18, and 22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chung in view of Bracco and in further view of U.S. Patent No. 4,847,641, to Tung, et al. (hereinafter Tung).

Claims 1-22 are rejected under 35 U.S.C. §112 second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In particular regarding claim 1,

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the Examiner found no support in the specification for the claim usage of the word "replacement". For those skilled in the art the "replacement" of a pixel is synonymous with "substituted" as found and used on page 6, line 34; page 11, line 4; and page 12, line 10; or "insertion" page 14, line 4; or "embed" as found on page 6, line 25; or "addition" page 11, line 32. The claims have now been amended to use "substituted" or "embed" in deference to the Examiner's concerns.

Regarding claims 2-3, the Examiner cites page 11, lines 5-8, and page 11, lines 31-34, and states that there are two distinct definitions therein for a black auxiliary pixel and again for a white auxiliary pixel. This is not correct, both definitions apply. For example, a "black" auxiliary pixel is found exterior to an image shape and is an "on" pixel in an otherwise "off" area within the bit map data context as described in the Applicants' specification.

Regarding claims 7-10, and 13-15, the Examiner states that no support can be found in the specification for "a second auxiliary pixel, wherein the first auxiliary pixel and the second auxiliary pixel are spaced from the image". However, support for this may be found in the Applicants' specification at page 15, lines 23-30, and also in Figures 9-11. Similarly, the Examiner states that no support can be found in the specification for "the first auxiliary pixel and the second auxiliary pixel being equally distant from the original image shape". However, support for this may be found in the Applicants' specification at page 15, lines 23-30, and also in Figures 9-11. Similarly, the Examiner states that no support can be found in the specification for "the first auxiliary pixel and the second auxiliary pixel are at least one pixel distant from the original image shape". However, support for this may be found in the Applicant's specification at page 15, lines 23-30, and also in Figures 9-11. Similarly, the Examiner states that no support can be found in the specification for "the first

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auxiliary pixel and the second auxiliary pixel are at least two pixels distant from the original image". However, support for this may be found in the Applicants' specification at page 15, lines 23-30, and also in Figures 9-11.

Further, the Examiner states that no support can be found in the specification for "the pattern of auxiliary pixels is clustered about a shape edge found in the original image". However, support for this may be found in the Applicant's specification at page 16, lines 15-35, and also in Figures 10-11. Similarly, the Examiner states that no support can be found in the specification for "the clustered auxiliary pixels are in a checkerboard pattern". However, support for this may be found in the Applicants' specification at page 16, lines 15-35, page 17, line 15, and also in Figures 10-11. Similarly, the Examiner states that no support can be found in the specification for "the pattern of auxiliary pixels is a dispersed array close to a shape edge found in the original image". However, support for this may be found in the Applicants' specification at page 16, lines 15-35, and also in Figures 10-11.

The Examiner states regarding claim 12 that the claim is unclear as no support is to be found in the specification for "a pattern of auxiliary pixels is substituted for a corresponding pattern of original pixels in the original image". However, support for this may be found in the Applicants' specification at page 16, lines 15-35, page 17, lines 1-27, and also in Figures 10-11.

The Examiner then states that with regard to claims 1-22 that the terms "auxiliary pixels" "black auxiliary pixels" and "white auxiliary pixels" are indefinite because the specification does not clearly redefine those terms. The Applicants must respectfully, but emphatically, traverse. The Applicants are indeed acting as their own lexicographer and go to considerable trouble again and again, throughout the entirety of the specification, to define and clarify

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these terms. See for example page 11, lines 1-13, lines 15-26, and lines 32-35; page 12 lines 1-35; page 16 lines 33-35; page 17 lines 1-3, etc. In view of all of the above, the Examiner is urged to read the specification. Please. In the alternative, the Examiner is requested to call the phone number below and discuss, so that these terms may be explained and the support for their definition particularly pointed out.

Removal of the rejection of claims 1-22 under 35 U.S.C. §112 second paragraph is respectfully requested.

The Examiner has rejected claims 1-6, 11, 12, 16, 17, 19, and 21 as being anticipated by Chung. Chung teaches that compensation for pixel aberrations in a laser printer is accomplished by altering pixels in accordance with pixel location. A projection of a scan line is skewed with respect to a line normal to the surface of an optical photoreceptor (OPR), which results in a change in the shape of projected pixels. Selected pixels are augmented in order to adjust their shape. The additional optical energy may be applied at the sub-pixel level so that a threshold of energy depletion on an optical photoreceptor (OPR) is not reached where image development would occur. Alternatively, the additional energy may be applied in a manner which provides additional development to simulate a pixel having a desired width across a scan line. The invention allows a scan line to be produced in which pixels across the scan line are made more uniform.

At column 7, lines 13-26, Chung describes the possibility of applying short duration energy pulses to areas surrounding a pixel for the purpose of enhancing that pixel. The enhancement is accomplished by applying short pulses to each adjacent pixel, resulting in a pixelation pattern. The selected center pixel is surrounded by pixels which are energized for short time periods. The short time periods are insufficient to result in enough depletion to create an

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image, but the depletion of these areas allows the imaging of center pixel to expand outwardly.

It is believed that the Applicants' claims as now amended overcome the Chung reference. While Chung describes the application of pixels which are energized for short time periods as surrounding a central pixel so as to enhance that single pixel, Chung fails to teach the application of black auxiliary pixels in close proximity to the edge of a shape, and exterior of that shape, so as to mitigate edge displacement and halo print problems.

A §102 "anticipation" rejection requires that a single reference teach (i.e., identically describe) each and every element of the rejected claim. That is, §102 anticipation requires that all of the elements and limitations of the claim are found within a single prior art reference. In other words, to constitute an anticipation, all material elements recited in a claim must be found in one unit of prior art. Chung fails to provide the Applicants' claimed application of black auxiliary pixels in close proximity to the edge of a shape, and exterior of that shape, so as to mitigate edge displacement and halo print problems. As the claims as now amended overcome the Chung reference, and since claims 2, 3, 5, 6, and 11 have been canceled, allowance of claims 1, 4, 12, 16, 17, 19, and 21 is respectfully requested.


Claims 7-10 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chung in view of Mailloux. Claims 13-15, and 20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chung in view of Bracco. Claims 18, and 22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chung in view of Bracco, and in further view of Tung. As claims 7-10, 13-15, 18, 20, and 22 all depend from claims deemed allowable they should be allowable as well. The removal of the rejection for claims 7-10, 13-15, 18, 20, and 22, is requested.

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Allowance of claims 1-22 are respectfully requested.

It is respectfully submitted that the present set of claims are patentably distinct over the cited references. In the event the Examiner considers personal contact advantageous to the disposition of this case, she is hereby requested to call the undersigned attorney at (585) 423-6918, Rochester, NY.

Respectfully submitted,



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March 29, 2004
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